

1 **CLAIMS**

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3 1. A nozzle for a hose or fixed pipework installation,
4 the nozzle comprising:

5 a body;
6 a channel extending through the body of the nozzle;
7 and
8 a fluid deflector arranged at or near the downstream
9 end of the channel, and wherein the fluid deflector
10 determines the direction of flow of the fluid as it
11 leaves the nozzle.

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13 2. A nozzle as claimed in Claim 1 wherein the fluid
14 deflector is located in a fluid flow path extending
15 through the nozzle along the channel.

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17 3. A nozzle as claimed in Claim 1 or Claim 2 wherein the
18 fluid deflector and the body of the nozzle together
19 define a width of the channel at or near said
20 downstream end.

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22 4. A nozzle as claimed in Claim 3 wherein the fluid
23 deflector includes a deflecting surface positioned
24 relative to the end of the channel to define the
25 width of the channel at or near the downstream end of
26 the channel.

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28 5. A nozzle as claimed in Claim 4 wherein at least part
29 of the channel is defined between the deflecting
30 surface and an outlet surface of the body.

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1 6. A nozzle as claimed in Claim 5 wherein the deflecting
2 surface and the body outlet surface are substantially
3 parallel.

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5 7. A nozzle as claimed in any one of Claims 4 to 6
6 wherein the deflector surface is disposed at an
7 obtuse angle relative to a main axis of the body.

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9 8. A nozzle as claimed in any one of Claims 3 to 7
10 wherein said channel width is variable by adjusting a
11 position of the fluid deflector relative to the
12 nozzle body.

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14 9. A nozzle as claimed in Claim 8 wherein the fluid
15 deflector is movably mounted relative to the body, to
16 enable adjustment of a position of the deflector
17 relative to the body, to facilitate adjustment of the
18 channel width.

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20 10. A nozzle as claimed in Claim 8 or Claim 9 wherein the
21 channel is provided with a gap or space suitable for
22 accommodating a spacer to alter the position of the
23 fluid deflector relative to the end of the channel,
24 thereby varying the width of said channel.

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26 11. A nozzle as claimed in any one of Claims 8 to 10
27 wherein the deflector is threadably coupled to the
28 body, such that rotation of the deflector relative to
29 the body advances and/or retracts the deflector
30 relative to the body, thereby facilitating adjustment
31 of the channel width.

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1 12. A nozzle as claimed in any one of Claims 8 to 11
2 wherein the nozzle comprises a mechanism for
3 adjusting the channel width, which is a self-cleaning
4 mechanism.

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6 13. A nozzle as claimed in Claim 12 wherein the mechanism
7 comprises an actuator and one or more sensors, the
8 actuator moving the deflector in response to a
9 detected increase in fluid flow rate indicative of
10 trapped debris in the nozzle.

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12 14. A nozzle as claimed in any one of Claims 4 to 13
13 wherein the fluid deflector comprises the deflecting
14 surface and a central beam, shaft, boss or the like
15 extending from the deflecting surface into the body
16 of the nozzle, the central beam being attachable to
17 the body of the nozzle.

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19 15. A nozzle as claimed in any preceding Claim wherein
20 the channel extending through the body of the nozzle
21 is an annular channel.

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23 16. A nozzle as claimed in any preceding Claim wherein
24 the nozzle further comprises a central channel
25 extending through the body of the nozzle.

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27 17. A nozzle as claimed in Claim 16 wherein the central
28 channel extends through the central beam of the
29 deflector.

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31 18. A nozzle as claimed in any preceding Claim wherein
32 the nozzle is further provided with sensor means.

1 19. A nozzle as claimed in Claim 18 wherein the sensor
2 means is located in the fluid deflector.

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4 20. A nozzle as claimed in Claim 19 wherein the sensor
5 means are embedded in a front surface of the fluid
6 deflector.

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8 21. A nozzle as claimed in Claim 18 wherein the sensor
9 means is located in the body of the nozzle.

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11 22. A nozzle as claimed in any one of Claims 16 to 21
12 wherein the nozzle further comprises filter coupling
13 means for coupling a filter to the upstream end of
14 the central channel.

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16 23. A nozzle as claimed in any one of Claims 16 to 22
17 wherein the nozzle further comprises nozzle-coupling
18 means for coupling a nozzle to the downstream end of
19 the central channel.

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21 24. A nozzle as claimed in any preceding Claim wherein
22 the fluid deflector is frusto-conical and is thus
23 provided with a frusto-conical deflecting surface,
24 angled away from the direction of fluid flow.

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26 25. A nozzle as claimed in Claim 24 wherein the frusto-
27 conical deflecting surface extends beyond the maximum
28 width of the channel to direct the flow of fluid.

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30 26. A kit of parts for a nozzle according to any one of
31 Claims 1 to 25, the kit of parts comprising a body
32 and a fluid deflector.

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1 27. A kit of parts as claimed in Claim 26 wherein the kit
2 further comprises a coupling means adapted
3 to connect the deflector to the body.

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5 28. A nozzle comprising:
6 a body having a fluid outlet;
7 a fluid flow channel extending through the body, the
8 channel in fluid communication with the body outlet;
9 and
10 a fluid deflector located adjacent the body outlet
11 and positioned such that fluid flowing along the
12 channel impinges on the deflector and is directed out
13 of the nozzle by the deflector, the direction of flow
14 of the fluid exiting the nozzle thereby determined by
15 the deflector.

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